

# Wieland-G05

CuSn5Zn5Pb5-C-GC | Red brass

## Material designation

EN CuSn5Zn5Pb5-C-GC  
CC491K

UNS –

## Chemical composition\*

Cu 84.5 %

Sn 5 %

Zn 5 %

Pb 5 %

\*Reference values in % by weight

## Physical properties\*

Electrical conductivity MS/m 8.6  
%IACS 15

Thermal conductivity W/(m·K) 72

Thermal expansion coefficient (0–300 °C) 10<sup>-6</sup>/K 18.3

Density g/cm<sup>3</sup> 8.74

Modulus of elasticity GPa 93

\*Reference values at room temperature

## Material properties and typical applications

**Wieland-G05** is a medium hard construction and bearing material with high elongation. It is mainly used in the fittings industry for water and vapour fittings up to 225°C and for pump casings subjected to normal stress.

## Types of delivery

The BU Extruded Products supplies bars, wire, sections and tubes. Please get in touch with your contact person regarding the available delivery forms, dimensions and tempers.

## Fabrication properties

### Forming

Machinability 85 %  
(CuZn39Pb3 = 100 %)

Capacity for being cold worked not possible

Capacity for being hot worked not possible

### Heat treatment

Melting range 860–1030 °C

Thermal stress relieving 250–400 °C  
1–3 h

## Corrosion resistance

Cast alloys belong to the most corrosion-resistant copper alloys. They exhibit excellent resistance to atmospheric influences, carbonic acid and saline water. Also important is their resistance to seawater and their insensitivity to stress corrosion cracking.

## Mechanical properties, reference values

	Tensile strength R <sub>m</sub> MPa	Yield strength R <sub>p0.2</sub> MPa	Elongation A %	Hardness HBW
Continuous casting	250	110	13	65

## Product standards

Cast alloys EN 1982